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Docket No. UF-216C1
Serial No. 10/062,623In the Claims

Claims 1-70 (Cancelled)

Claim 71 (Currently amended): A method of controlling a pest wherein said method comprises applying to the pest, or to a pest-inhabited locus, ~~a pestically effective amount of~~ transformed cells expressing ~~a an exogenous~~ polynucleotide encoding a pesticidal polypeptide, wherein the pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24, and wherein the pest ingests the pesticidal polypeptide.

Claim 72 (Previously added): The method of claim 71, wherein the pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:3.

Claim 73 (Previously added): The method of claim 71, wherein the pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO. 4.

Claim 74 (Previously added): The method of claim 71, wherein the pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 75 (Previously added): The method of claim 71, wherein the pesticidal polypeptide is a fusion polypeptide.

Claim 76 (Previously added): The method of claim 75, wherein the fusion polypeptide is a multimer of the amino acid sequence.

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Claim 77 (Previously added): The method of claim 71, wherein the cells are pest food cells comprising the polynucleotide encoding the pesticidal polypeptide.

Claim 78 (Cancelled)

Claim 79 (Previously added): The method of claim 71, wherein the cells are algae cells.

Claim 80 (Previously added): The method of claim 71, wherein the cells are a *Clorella* species.

Claim 81 (Previously added): The method of claim 71, wherein the cells are yeast cells.

Claim 82 (Previously added): The method of claim 71, wherein the cells are applied in a living state.

Claim 83 (Previously added): The method of claim 71, wherein the cells are applied in a non-living state.

Claim 84 (Previously added): The method of claim 71, wherein the cells are applied as a component of a pesticidal composition which also comprises a pesticidally acceptable carrier.

Claim 85 (Currently amended): The method of claim 71, wherein the pest utilizes a serine esterase as a digestive enzyme, and wherein the pesticidal polypeptide inhibits synthesis of the serine esterase within the pest.

Claim 86 (Currently amended): The method of claim 71, wherein the pest utilizes trypsin as a digestive enzyme, and wherein the pesticidal polypeptide inhibits synthesis of the trypsin within the pest.

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Claim 87 (Previously added): The method of claim 71, wherein the pest is selected from the group consisting of coleopterans, lepidopterans, and dipterans.

Claim 88 (Previously added): The method of claim 71, wherein the pest is a blood-sucking pest.

Claim 89 (Previously added): The method of claim 71, wherein the pest is of the suborder Nematocera.

Claim 90 (Previously added): The method of claim 71, wherein the pest is a pest of the family Colicidae.

Claim 91 (Previously added): The method of claim 71, wherein the pest is a dipteran.

Claim 92 (Previously added): The method of claim 71, wherein the pest is of a genus selected from the group consisting of *Heliothis*, *Culex*, *Theobaldia*, *Aedes*, *Anopheles*, *Forcipomyia*, *Culicoides* and *Helea*.

Claim 93 (Previously added): The method of claim 71, wherein the pest is selected from the group consisting of mosquitoes, flesh flies, fleas, sand flies, house flies, and dog flies.

Claim 94 (Previously added): The method of claim 71, wherein the pest is a mosquito.

Claim 95 (Previously added): The method of claim 71, wherein the pest is of a species selected from the group consisting of: *Aedes aegypti*, *Culex quinquefasciatus*, *Anopheles albimanus*, *Anopheles quadrimaculatus*, *Lutzomyia anthrophora*, *Culicoides variipennis*, *Stomoxys calcitrans*, *Musca domestica*, *Ctenocephalides felis*, and *Heliothis virescens*.

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Claim 96 (Previously added): The method of claim 71, wherein said method comprises applying the cells to a pest-inhabited locus.

Claim 97 (Previously added): The method of claim 96, wherein the pest-inhabited locus is a body of water.

Claim 98 (Previously added): The method of claim 71, wherein the cells are applied in association with a pest food.

Claim 99 (Currently amended): A method for preparing a pesticidal composition comprising transforming a host cell with a an exogenous polynucleotide encoding a pesticidal polypeptide, operatively linked to a promoter, and bringing the transformed host cell into association with a pesticidally acceptable carrier, wherein the pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 100 (Previously added): The method of claim 99, wherein the pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:3.

Claim 101 (Previously added): The method of claim 99, wherein the pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:4.

Claim 102 (Previously added): The method of claim 99, wherein the pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

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Claim 103 (Previously added): The method of claim 99, wherein the pesticidal polypeptide is a fusion polypeptide.

Claim 104 (Previously added): The method of claim 103, wherein the fusion polypeptide is a multimer of the amino acid sequence.

Claim 105 (Currently amended): An expression vector comprising a promoter and a polynucleotide encoding a pesticidal polypeptide wherein the promoter has the capacity to control expression of the pesticidal polypeptide said polynucleotide in a host cell, and wherein the said pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 106 (Previously added): The expression vector of claim 105, wherein said pesticidal polypeptide comprises the amino acid of SEQ ID NO:3.

Claim 107 (Previously added): The expression vector of claim 105, wherein said pesticidal polypeptide comprises the amino acid of SEQ ID NO:4.

Claim 108 (Previously added): The expression vector of claim 105, wherein said pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 109 (Previously added): The expression vector of claim 105, wherein said pesticidal polypeptide is a fusion polypeptide.

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Claim 110 (Previously added): The expression vector of claim 109, wherein said fusion polypeptide is a multimer of said amino acid sequence.

Claim 111 (Currently amended): A transformed cell comprising ~~a~~ an exogenous polynucleotide encoding a pesticidal polypeptide, operatively linked to a promoter, wherein said cell expresses said polynucleotide to produce said pesticidal polypeptide, and wherein said pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 112 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:3.

Claim 113 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:4.

Claim 114 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:6.

Claim 115 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:8.

Claim 116 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:10.

Claim 117 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:12.

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Claim 118 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:14.

Claim 119 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:16.

Claim 120 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:18.

Claim 121 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:20.

Claim 122 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:22.

Claim 123 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:23.

Claim 124 (Previously added): The transformed cell of claim 111, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:24.

Claims 125-126 (Cancelled)

Claim 127 (Previously added): The transformed cell of claim 111, wherein the transformed cell is a pest food.

Claim 128 (Previously added): The transformed cell of claim 111, wherein the transformed cell is mosquito larvae food.

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Claim 129 (Previously added): The transformed cell of claim 111, wherein the transformed cell is an algae cell.

Claim 130 (Previously added): The transformed cell of claim 111, wherein the transformed cell is a green algae cell.

Claim 131 (Previously added): The transformed cell of claim 111, wherein the transformed cell is a *Clorella* species.

Claim 132 (Previously added): The transformed cell of claim 111, wherein the transformed cell is a yeast cell.

Claim 133 (Currently amended): A pesticidal composition comprising: transformed cells expressing a an exogenous polynucleotide encoding a pesticidal polypeptide, operatively linked to a promoter, wherein said pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24; and a pesticidally acceptable carrier.

Claim 134 (Previously added): The pesticidal composition of claim 133, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:3.

Claim 135 (Previously added): The pesticidal composition of claim 133, wherein said pesticidal polypeptide comprises the amino acid sequence of SEQ ID NO:4.

Claim 136 (Previously added): The pesticidal composition of claim 133, wherein said pesticidal polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID

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NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 137 (Previously added): The pesticidal composition of claim 133, wherein said composition is in a form selected from the group consisting of pellets, briquettes, bricks, powders, granules, sprays, solutions and capsules.

Claim 138 (Previously added): The pesticidal composition of claim 133, wherein said composition is formulated to float on an aqueous medium.

Claim 139 (Previously added): The pesticidal composition of claim 133, wherein said composition is formulated to maintain a depth of 0 to 2 feet below the surface of an aqueous medium.

Claim 140 (Previously added): The pesticidal composition of claim 133, wherein said composition is formulated to sink in an aqueous medium.

Claim 141 (New): An expression vector comprising a promoter and a polynucleotide encoding a pesticidal polypeptide wherein the promoter has the capacity to control expression of said polynucleotide in a host cell, and wherein the pesticidal polypeptide consists of an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

Claim 142 (New): A transformed cell comprising an exogenous polynucleotide encoding a pesticidal polypeptide, operatively linked to a promoter, wherein said cell expresses said polynucleotide to produce said pesticidal polypeptide, and wherein said pesticidal polypeptide consists of an amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID

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NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

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